UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,480	10/06/2005	Shigeru Suzuki	270161US0PCT	5338

22850 7590 04/16/2007

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
O HERN, BRENT T	
ART UNIT	**PAPER NUMBER**
1772	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/16/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/16/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/530,480	SUZUKI ET AL.	
	Examiner	Art Unit	
	Brent T. O'Hern	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *24-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23,28 and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *DEC 6 2006, FEB 22 2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims

1. Claims 1-29 are pending with claims 24-27 withdrawn.

WITHDRAWN REJECTIONS

2. The 35 U.S.C. 103(a) rejection of claims 1-20, 22-23 and 28-29 as being as being unpatentable over Matsui et al. (US 6,841,261) in view of Sasagawa et al. (6,852,806) of record in the Office Action mailed 30 November 2006, page 2, paragraph 2 have been withdrawn due to Applicant's amendments in the Paper filed 22 February 2007.

3. The 35 U.S.C. 103(a) rejection of claim 21 as being as being unpatentable over Matsui et al. (US 6,841,261) in view of Sasagawa et al. (6,852,806) and Teranishi et al. (6,184,289) of record in the Office Action mailed 30 November 2006, page 11, paragraph 3 has been withdrawn due to Applicant's amendments in the Paper filed 22 February 2007.

NEW REJECTIONS

4. Claims 1-20, 22-23 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 6,841,261) in view of Bradfute et al. (5,658,625).

Regarding claims 1, 13 and 14, Matsui ('261) teaches a heat shrinkable film comprising a resin composition *(col. 1, ll. 6-23)* comprising the following components (A) and (B) obtained by orientation at least in monoaxial direction *(col. 2, ll. 56-60 and col. 8, ll. 18-20)*, and having a heat shrinkage ratio at 80 °C for 10 seconds of at least 20% *(See col. 36, Table 1 and col. 32, ll. 48-49, heat shrinkable ratio of at least 20%.)*:

(A) 50 to 95 mass % of a block copolymer comprising an aromatic vinyl compound and a conjugated diene in a proportion of the aromatic vinyl compound of from 50 to 90

mass % *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 41-46.)*, and having a micro phase separation structure comprising a soft phase and a hard phase *(col. 5, ll. 35-43)*, and

(B) 5 to 50 mass % of a styrene type polymer *(col. 9, ll. 28-35 and ll. 42-46)*, however, fails to expressly disclose wherein the structure is syndyotactic and forms a domain in the resin composition.

However, Bradfute ('625) teaches wherein the styrene-type polymer has a syndyotactic structure and forms a domain in the resin composition *(col. 17, ll. 3-45)* for the purpose of providing improved resistance and reduced flex cracks *(col. 17, ll. 36-38)*.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to use a structure that is syndyotactic as taught by Bradfute ('625) in Matsui ('261) in order to provide a shrink label with improved resistance and reduced flex cracks

The phrase **"(C) 0 to 45 mass % of a styrene type polymer different from the components (A) and (B)"** in claim 1, lines 13-14 is interpreted as not limiting since "(C)" can be 0%.

The phrase **"wherein no holes of 1 mm or larger are confirmed after the film is left at rest on a hot plate of 120 °C for 120 seconds so that the film and the hot plate are in contact with each other"** in claim 13, lines 2-5 are **process limitations** in a product claim and hence not given any patentable weight since patentability of a product does not depend on its method of production *(see MPEP § 2173.05(p))*.

Regarding claim 2, Matsui ('261) teaches a film wherein the block copolymer as the component (A) has a random copolymer block portion of the aromatic vinyl compound and the conjugated diene in its structure *(col. 3, ll. 59-63)*.

Regarding claim 3, Matsui ('261) teaches a film wherein the component (A) has the following characteristics:

(1) the loss tangent (tan δ) has one or more maximum values within a temperature range of at least 65 °C and less than 100 °C in the dynamic viscoelassticity spectrum *(col. 3, ll. 31-38)*,

(2) the highest value of the maximum values corresponding to (1) is within a range of at least 1.5 and less than 4.0 *(col. 3, ll. 36-37)*,

(3) the loss tangent at a temperature lower by 10 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 40% of the highest maximum value *(col. 3, ll. 19-30)*,

(4) the loss tangent at a temperature lower by 30 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 10% of the highest maximum value *(col. 3, ll. 28-30)*, and

(5) the loss tangent at 30 °C is within a range of at least 0.01 and less than 0.4 *(col. 3, ll. 37-38)*.

Regarding claim 4, Matsui ('261) teaches a film wherein the resin composition constituting the heat shrinkable film has the following characteristics:

(1) the loss tangent (tan δ) has one or more maximum values within a temperature range of at least 65 °C and less than 100 °C in the dynamic viscoelasticity spectrum *(col. 3, ll. 21-26)*,

(2) the highest value of the maximum values corresponding to (1) is within a range of at least 1.5 and less than 4.0 *(col. 3, ll. 36-37)*,

(3) the loss tangent at a temperature lower by 10 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 40% of the highest maximum value *(col. 3, ll. 19-30)*,

(4) the loss tangent at a temperature lower by 30 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 10% of the highest maximum value *(col. 3, ll. 28-38)*, and

(5) the loss tangent at 30 °C is within a range of at least 0.01 and less than 0.4 *(col. 3, ll. 37-38)*.

Regarding claim 5, Matsui ('261) obviously teaches a film having a spontaneous shrinkage ratio at 40 °C for 7 days of at most 5% since a functionally equivalent film would clearly have the same shrinkage ratio *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 28-46)*.

Regarding claim 6, Matsui ('261) teaches a film which contains a styrene type polymer having a random copolymer block portion of an aromatic vinyl compound and a conjugated diene in its structure as the styrene type polymer as the component (C) *(col. 3, ll. 59-63)*.

Regarding claim 7, Matsui ('261) obviously teaches a rubber-modified polystyrene containing dispersed rubber particles having a volume average particle size of at most 2 μm as the styrene type polymer as the component (C) since a functionally equivalent film would clearly have the same particle size *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 28-46)*.

Regarding claim 8, Matsui ('261) teaches a film which contains a styrene type polymer having a random copolymer structure of styrene and a meth(acrylate) in its structure as the styrene type polymer as the component (C) *(col. 5, ll. 35-44 and col. 14, ll. 55-65)*.

Regarding claim 9, Matsui ('261) obviously teaches a film wherein the styrene type polymer as the component (B) has a crystalline melting point within a range of from 160 °C to 260 °C, and a crystalline melting energy of at least 1 J/g since a functionally equivalent film would clearly have the same crystalline melting point and melting energy *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 28-46)*, however, fails to disclose wherein the structure is syndyotactic.

However, Bradfute ('625) teaches wherein the structure is syndyotactic *(col. 17, ll. 3-45)* for the purpose of providing improved resistance and reduced flex cracks *(col. 17, ll. 36-38)*.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to use a structure that is syndyotactic as taught by Bradfute ('625) in Matsui ('261) in order to provide a shrink label with improved resistance and reduced flex cracks

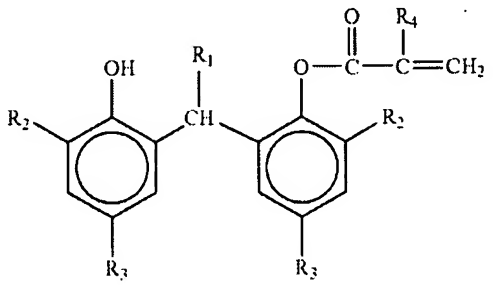
Regarding claim 10, Matsui ('261) inherently teaches a crystallinity of from 3 to 80% and a cold crystallization temperature of from 120 to 170 °C derived from the component (B) since a functionally equivalent film would clearly have the same crystallinity and cold crystallization temperature *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 28-46)*.

Regarding claim 11, Matsui ('261) obviously teaches a film having an internal haze of at most 30% since a functionally equivalent film would clearly have the same internal haze *(See col. 3, ll. 16-21, col. 4, ll. 11-14 and col. 9, ll. 28-46)*.

Regarding claim 12, Matsui ('261) teaches the film discussed above, however, fails to expressly disclose wherein the ratio of the relaxation stresses in the orientation direction of the film and in a direction at right angles therewith, is from 1.2 to 10.

However, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to vary the processing condition to provide a film wherein the ratio of the relaxation stresses in the orientation direction of the film and in a direction at right angles therewith is from 1.2 to 10 for the purpose of providing a film that has low shrinkability and excellent appearance as taught by Matsui ('261) *(col. 2, ll. 43-50)*.

Regarding claim 15, Matsui ('261) teaches the film discussed above, however, fails to expressly disclose wherein an acrylate type compound (D) represented by the following formula in an amount of from 0.1 to 3 parts by mass per 100 parts by mass of the total amount of the components (A), (B) and (C):



wherein R_1 represents hydrogen or a C_{1-3} alkyl, each of R_2 and R_3 which are independent of each other, represents a C_{1-9} alkyl, and R_4 represents hydrogen or methyl.

However, Matsui ('261) teaches a (meth)acrylate in the block copolymer composition with the above weight ratio *(see col. 5, ll. 35-44 and col. 14, ll. 45-55)* for the purpose of improving processability and low temperature orientation properties *(see col. 14, ll. 63-65)*.

Therefore, it would have been obvious to use the above functionally equivalent acrylate as taught by Matsui ('261) in order to provide a composite with improved processability and low temperature orientation properties.

Regarding claim 16, Matsui ('261) teaches a film that contains a phosphorus type stabilizer *(see col. 16, ll. 23-36)*, however, fails to expressly disclose an amount of from 0.1 to 1 part by mass per 100 parts by mass of the total amount of the components (A), (B) and (C).

However, it would have been obvious to one having ordinary skill in the art to add from 0.1 to 1 part by mass stabilizer containing phosphorus per 100 parts by mass of the total amount of the components (A), (B) and (C) for the purpose of preserving the physical properties of the film *(col. 16, ll. 17-26)*.

Regarding claim 17, Matsui ('261) teaches wherein the film contains a phenol type stabilizer (except the component (D)) *(col. 16, l. 30)*, however, fails to expressly disclose an amount of from 0.1 to 1 part by mass per 100 parts by mass of the total amount of the components (A), (B) and (C).

However, it would have been obvious to one having ordinary skill in the art to add from 0.1 to 1 part by mass stabilizer containing phenol per 100 parts by mass of the total amount of the components (A), (B) and (C) for the purpose of preserving the physical properties of the film *(col. 16, ll. 17-26)*.

Regarding claim 18, Matsui ('261) teaches the film discussed above, however, fails to expressly disclose wherein the film is an expanded product.

However, Bradfute ('625) teaches wherein the film is an expanded product *(col. 8, ll. 1-4)* for the purpose of providing a flexible article in multiple directions *(col. 8, ll. 1-8)*.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to provide a film that is expanded as taught by Bradfute ('625) in Matsui ('261) in order to provide a flexible article.

Regarding claim 19, Matsui ('261) teaches a film having a multilayer structure, which has at least one layer of the heat shrinkable film *(col. 2, l. 49)*.

Regarding claim 20, Matsui ('261) teaches the film discussed above, however, fails to expressly disclose wherein at least one of the outermost layers is made of a resin composition containing at least one copolymer selected from a styrene/butadiene block copolymer, a styrene/isoprene block copolymer and a styrene/meth(acrylate) type copolymer.

However, Matsui ('261) teaches wherein the film is a heat shrinkable multilayer film made of the above composition *(col. 2, ll. 43-50)*, therefore it would have been obvious that the layer be in the outermost position in order to provide a film with satifactory shrinkability properties *(see col. 2, ll. 38-42)* as taught by Matsui ('261).

Regarding claim 22, Matsui ('261) teaches wherein the film has a multilayer structure consists of three layers, the inner layer is the heat shrinkable film, and the proportion of the thickness of the three layers is 1 to 30:98 to 40:1 to 30 (the total is 100) *(col. 39, Table 4, col. 43, Table 9 and col. 49, Table 16)*.

Regarding claim 23, Matsui ('261) teaches wherein the multilayer structure consists of two layers, one layer is the heat shrinkable film as defined in any one of claims 1 to 18, and the proportion of the thickness of the two layers is 5 to 95:95 to 5 (the total is 100) *(See col. 17, ll. 8-27 and col. 39, Table 4 wherein the thickness proportion is 10:80 (11:89).)*.

Regarding claim 28, Matsui ('261) teaches a packaging label comprising the heat shrinkable film *(col. 2, l. 9)*.

Regarding claim 29, Matsui ('261) teaches a container packaged with the heat shrinkable film *(col. 2, l. 9)*.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 6,841,261) in view of Bradfute et al. (5,658,625) and Teranishi et al. (6,184,289).

Regarding claim 21, Matsui ('261) teaches wherein at least one of the outermost layers contains a rubber-modified polystyrene containing dispersed rubber particles having a volume average particle size of at most 2 μm *(col. 31, ll. 49-57 and col. 17, ll. 8-27)*, however, fails to expressly teach an amount of from 0.1 to 10 mass %.

However, Teranishi ('289) teaches wherein the amount of rubber particles is an amount of from 0.1 to 10 mass % *(col. 8, ll. 20-29 and 49-55)* for the purpose of providing optimal strength and appearance *(col. 8, ll. 30-44)*.

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide the above amount of rubber particles as taught by Teranishi ('289) in Matsui ('261) in order to provide a structure with optimal strength and appearance.

ANSWERS TO APPLICANT'S ARGUMENTS

6. In response to Applicant's argument *(p. 12, paras. 2-3 of Applicant's Paper filed 22 February 2007)* that the Examiner is relying on col. 5, ll. 35-43 of Matsui ('261) for the teaching of component (A), it is noted that Applicant appears to have misread the Office Action as the Examiner does not rely on said passage. The Examiner relies on the passage for teaching the soft and hard phases as evidenced by the rubber-like elastic body and disperse phase. Applicant has not precisely addressed the cited teaching of Matsui ('261) as stated in the Office Action.

7. In response to Applicant's argument *(p. 12, para. 3 of Applicant's Paper filed 22 February 2007)* that Matsui ('261) does not teach component (C), it is noted as discussed above, that said limitation is not limiting since (C) can be 0%.

8. In response to Applicant's argument *(p. 12, para. 5 of Applicant's Paper filed 22 February 2007)* that Sasagawa et al. (6,852,806) does not teach the specified styrene polymer, it is noted that the rejections based on Sasagawa et al. (6,852,806) have been withdrawn, thus the argument is moot.

9. In response to Applicant's statement *(p. 13, para. 1 of Applicant's Paper filed 22 February 2007)* regarding Teranishi ('289), it is noted that Applicant has not provided any analysis to support said conclusion.

10. In response to Applicant's statement *(p. 13, paras. 3-5 of Applicant's Paper filed 22 February 2007)* regarding the non-English references in the IDS, it is noted that Applicant has not precisely pointed out what portions of the foreign references are relevant and where said explanations of the references may be other than they may be in the Specification or in the ISR. Since Applicant has taken the position that they do not

know where said explanations are located, or even if there are explanations at all, then the Examiner takes the position that the references are not relevant and thus are not being considered.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-2172. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brent T O'Hern
Examiner
Art Unit 1772
March 26, 2007

NASSER AHMAD 4/9/07
PRIMARY EXAMINER